

CLAIMS

What is claimed is new and desired to be protected by Letters Patent is set forth in the appended claims:

1. An apparatus for regulating the internal pressure of a closed system, comprising:
 - a) a valve housing connected to said closed system
 - b) an intake valve connected to said valve housing for receiving a pressurized substance in one direction through said valve housing into the closed system;
 - c) a release valve connected to said valve housing for releasing excess pressure through said valve housing from the closed system, said release valve comprising:
 - i. a release valve aperture for releasing pressurized substance therethrough;
 - ii. a release valve block positioned within said release valve aperture for selectively preventing said pressurized substance from escaping said valve housing through said release valve aperture;
 - iii. a release valve spring connected to said release valve block

for retaining said release valve block in a closed position wherein said release valve spring retains said release valve block in the closed position thereby maintaining a constant internal pressure and upon increasing said constant internal pressure said release valve spring causes said release valve block to move from the closed position to an open position, thereby allowing an excess pressurized substance to escape from said release valve aperture.

2. The apparatus as recited in claim 1, further comprising a setting nut connected to said valve housing and said release valve spring for selectively compressing said release valve spring for determining a desired pressure level to be maintained within said closed system as expressed by the alignment of said setting nut with graduated indicia imprinted on the outside of said valve housing.

3. The apparatus as recited in claim 2, wherein said housing includes graduated indicia etched therein and said desired pressure level is obtained by aligning said setting nut with respective indicia on said housing.

4. The apparatus as recited in claim 3, wherein said setting nut is adjusted in accordance with the formula $P=KX/A$, where area A and spring constant K are constants

and variable setting X obtains the pressure P.

5. The apparatus as recited in claim 3, further comprising a retaining nut for retaining said setting nut in a desired position.

6. The apparatus as recited in claim 5, wherein said retaining nut is threadedly attached to said valve housing.

7. The apparatus as recited in claim 1, wherein said intake valve comprises:
- a) an intake valve aperture for receiving pressurized substance from a source supply into the closed system;
 - b) an intake valve block for preventing the escape of pressurized substance from the closed system through said intake valve aperture;
 - c) an intake valve spring for retaining said intake valve block in a closed position; and
 - d) a source supply trigger pin for forcing said intake valve block into an open position thereby allowing pressurized substance to enter the closed system wherein said intake valve spring retains said intake valve block in a closed position

8. The apparatus as recited in claim 1, wherein said intake valve aperture is threadedly covered by a cap.

9. The apparatus as recited in claim 1, wherein said valve housing is connected to a tire.

10. A method for regulating the internal pressure of a closed system, comprising the following steps:

- a. adjusting a setting nut to a desired maximum pressure;
- b. receiving a pressurized substance in one direction into the closed system through an intake valve; and
- c. releasing pressure in excess of the desired maximum pressure from the closed system through a release valve.

11. The method as recited in claim 10, further comprising the step of threadedly tightening a retaining nut to engage the setting nut.

12. The method as recited in claim 10, wherein said releasing step comprises pressure in the closed system in excess of the desired maximum pressure forcing the

release valve block into an open position against the force of the release valve spring, thereby allowing pressure to escape from the closed system through the release valve aperture.

13. The method as recited in claim 10, wherein said receiving step comprises receiving pressurized air.